

SUBJECT: Adjustment Index  
LA-6, MA-4 and MA-5 Models

DATE: May 31, 1935

TO ALL OFFICES:

This Bulletin covers an index of the most important LA-6, MA-4 and 5 Model adjustments and identifies the Machine Service Bulletins containing complete information where the details may be found.

Servicemen will find this data very helpful, for quick reference purposes.

LA-6 ADJUSTMENTS

- 1 Nines not clearing out in lower dials caused by through-carry unit locking up.-- PLATES 7 and 8, M.S.B. 178. ALSO M.S.B. 181
- 2 Incorrect figure registering when the constant is being set into the carriage.-- PLATES 3 and 4, M.S.B. 178
- 3 Mechanism tripping and shifting before the registering dial opposite the R. H. arrow on the keyboard registers zero.--PLATE 6, M.S.B. 178
- 4 Figure "nine" remaining in multiplication counting dial.--PLATE 5, M.S.B. 178
- 5 Speed of machine varying while operating.--M.S.B. 205
- 6 Continuous running of machine in addition or subtraction.--PLATES 1 and 2, M.S.B. 193
- 7 Nines remaining in lower dials.--PLATES 2 and 3, M.S.B. 193
- 8 Registering dials functioning sluggishly, oft times resulting in half figures appearing in the carriage windows.--PLATES 4, M.S.B. 195
- 9 Figures remaining in registering dials when attempting to clear the constant multiplier.--PLATE 5, M.S.B. 195
- 10 Locking mechanism which has been added to prevent the multiplication lever from being operated when the carriage is in the first or second position.--M.S.B. 165
- 11 Figure "one" remaining in the upper R.H. dial at completion of a problem in automatic multiplication and not clearing out automatically.--PLATE 22, M.S.B. 161-B
- 12 A figure remaining in upper R.H. dial at completion of a problem not clearing out when carriage crank is turned.--PLATE 22, M.S.B. 161-B
- 13 During automatic multiplication, incorrect figures appearing in the lower R.H. dials.--PLATE 27, M.S.B. 161-B
- 14 Improper alignment of through-carry unit.--PLATE 9, M.S.B. 161
- 15 Machine miscalculating.--M.S.B. 221
- 16 Subtraction gear 27-725 and planet gear 2736 breaking.--M.S.B. 184
- 17 Start and stop switches "shorting" against side frame.--M.S.B. 185
- 18 "Shorting" in start and stop switches 40-797x1 and 50-797x1.--M.S.B. 196



- 19 Figure "one" remaining in the multiplication counting dials.--PLATE 5, M.S.B. 178. ALSO PLATE 11, M.S.B. 161
- 20 Machine continuing to run in a forward direction after multiplication counting dial has been returned to zero.--PLATES 5 and 8, M.S.B. 178
- 21 Machine continuing to run in a forward direction when the carriage shifts to either of the first two columns.--PLATES 5 and 8, M.S.B. 178
- 22 Machine making one or more reverse cycles after shifting in multiplication.--PLATES 6 and 8, M.S.B. 178
- 23 Machine continuing to run in a forward direction after the carriage has shifted to the first column in multiplication.--PLATE 6, M.S.B. 178
- 24 Machine shifting and stopping in multiplication or division.--M.S.B. 193  
ALSO PLATE 6, M.S.B. 178
- 25 Machine continuing to run when carriage reaches last position.--PLATES 8 and 9, M.S.B. 178. ALSO M.S.B. 193
- 26 Carriage locks releasing before the carry is completed causing the carriage dial gears to be thrown out of mesh with the extra carry gears of the unit, resulting in an error.--PLATE 8, M.S.B. 178
- 27 Machine continuing to run at the end of subtraction in automatic division or at the end of the forward correction cycle.--PLATE 12, M.S.B. 178
- 28 Machine reversing itself in automatic division before the division is complete in a column.--PLATE 12, M.S.B. 178
- 29 Fastening of machine cover case to through-carry unit disturbing alignment of unit with intermediate gears.--PLATE 1, M.S.B. 178
- 30 Wrong number registering after a clearing operation or if a number registers when clearing and no constant is set in.--PLATE 4, M.S.B. 178
- 31 Wrong figures registering when constant is being set into the carriage.--PLATE 4, M.S.B. 178
- 32 Correct number not registering when setting the constant into the carriage although dial mechanism appears to be correct.--PLATE 4, M.S.B. 178
- 33 Division lever return mechanism shown in M.S.B. 161-B not functioning properly.--M.S.B. 177
- 34 41-930 multiplier slide not unlatching from 49074 slide latch.--PLATE 6, M.S.B. 161
- 35 41-930 multiplier slide not raising high enough to latch on the 49074 slide latch.--PLATE 5, M.S.B. 161
- 36 Difficulty in removing through-carry unit from the machine.--PLATE 2, M.S.B. 161
- 37 Difficulty in properly adjusting through-carry unit trip arms for height.--PLATE 1, M.S.B. 161
- 38 Engaging lug not contacting the 49060 trip lever when installing a new 49083 zero return arm.--PLATE 23, M.S.B. 161-B



- 39 41-623-1/8 lock bar not properly adjusted to carriage rack.--PLATE 25, M.S.B. 161-B
- 40 45800 spring losing its tension due to installing.--PLATE 50, M.S.B. 161-D
- 41 Dial carry pins loosening.--M.S.B. 211, "Talk by W. W. Fisher."
- 42 Key buttons coming off.--M.S.B. 211, "TALK by W. W. FISHER."
- 43 Finish of supplementary and top plates wearing off.--M.S.B. 211, "TALK by W. W. FISHER."
- 44 Difficulty encountered with individual wedges snapping downward either too quickly or sluggishly.--PLATE 2, M.S.B. 221. ALSO M.S.B. 211, UNDER HEADING "LA-6 MODEL."
- 45 Difficulty in properly adjusting 3012 set screw in left hand end of carriage shell.--M.S.B. 195. ALSO PLATE 3, M.S.B. 178
- 46 Determining if clutch yoke is correctly adjusted.--PLATES 3 and 4, M.S.B. 193
- 47 Rocking of constant dial depressing a wedge.--PLATE 5, M.S.B. 195
- 48 Test to be given the LA-6 to determine proper functioning.-- PAGE 1, M.S.B. 195
- 49 Cleaning dials without injuring the finish.--M.S.B. 197
- 50 4695 guide rail interfering with seating of carriage.--M.S.B. 183
- 51 Carriage not shifting properly.--M.S.B. 137. ALSO PLATE 11, M.S.B. 131. ALSO PLATE 27. M.S.B. 161-B
- 52 Bulletins containing parts and assemblies numbers for LA-6 model.--M.S.Bs. 161-A, 165, 167, 177, 178, 181, 183, 184, 185, 194, 196, 205, 215, 221, 161-A1, 95-C
- 53 Automatic control of repeat and non-repeat keys.--INSTALL MECHANISM SHOWN IN M.S.B. 167

#### MA-4 ADJUSTMENTS

- 1 Excessive "roll" or free movement of the carriage shifter will permit the shifter yoke to position off center when it should be held firmly in place by the 54-1330 locator, thus causing the yoke rollers to strike the carriage rack and fail to enter the rack notches.--M.S.B. 229
- 2 55230½ carriage rack locks under stud on 54-5241½.--M.S.B. 229
- 3 Shifter is withdrawn by operator while shifting by hand and it locks between keyboard and carriage rack.--M.S.B. 220-A
- 4 Action of carriage shifter sluggish after installing mechanism shown in Machine Service Bulletin 220-A.--M.S.B. 229
- 5 Carriage shifts too rapidly causing overthrow.--M.S.B. 223
- 6 Parts and assemblies price list.--M.S.B. 225



MA-5 ADJUSTMENTS

- 1 Improper shifting of carriage when shift keys are operated.— PLATES 1 and 2, M.S.B. 212
- 2 Shift keys, division lever, plus and minus keys locking against depression when carriage in normal operating position and motor running continuously.—PLATES 3 and 4, M.S.B. 212
- 3 Improper shifting of carriage during automatic division.—PLATES 3 and 4, M.S.B. 212
- 4 Speed of machine varying while operating.— M.S.B. 205
- 5 Counting dial clear shaft 3501½ bending or breaking.—M.S.B. 216
- 6 Carriage attempting to shift twice in automatic division.—M.S.B. 157
- 7 Difficulty in aligning carry counting fingers.—M.S.B. 203
- 8 MA-5-W shift keys not responding to instant operation.—PLATE 3, M.S.B. 209
- 9 Plunger does not enter carriage rack in sufficient time to prevent an overthrow and it is impossible to adjust the plunger closer than 1/32" without running into a trouble whereby the plunger does not withdraw from the carriage rack in time.—M.S.B. 229
- 10 Locking latch 59110 does not remain in engagement with the 54050 special carry cam on the main carry shaft until the carriage has definitely finished its automatic shifting.—M.S.B. 229
- 11 Machine fails to finish operating in automatic division caused by point to point condition between the 59092 and 59110.—M.S.B. 229
- 12 59110 locking latch camming off 54050 carry arm.—M.S.B. 229
- 13 Fingers slip off shift bars when operating rapidly.—M.S.B. 224

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